

REMARKS

Status

As is correctly indicated in the Office Action Summary, Claims 1-31 are pending. Claims 5 and 14 have been withdrawn from consideration. Claims 1-4, 6-13, and 15-31 stand rejected.

Double Patenting Rejection Over U.S. Patent No. 6,251,373 to Candau

Claims 1-31 were rejected under the judicially-created doctrine of obviousness-type double patenting over Claims 1-40 of U.S. Patent No. 6,251,373 to Candau ("Candau"). This rejection is respectfully traversed.

Not to acquiesce in the Examiner's rejection, but solely to facilitate prosecution, Applicant submits herewith a terminal disclaimer over Candau. Applicant believes this disclaimer obviates the Examiner's rejection.

Rejections Under 35 U.S.C. § 103

Claims 1-4, 6-13, and 15-31 stand rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over U.S. Patent No. 6,030,629 to Hansenne ("Hansenne") or U.S. Patent No. 6,171,579 to Allard et al. ("Allard") in view of European Patent 0 775 698 to Hüglin et al. ("Hüglin"). This rejection is respectfully traversed.

1. **A *Prima Facie* Case of obviousness Has Not Been Established**

As indicated in Applicant's Reply and Amendment filed August 9, 2002 ("Reply"), a *prima facie* obviousness showing requires meeting three basic criteria: (1) there must be

some suggestion or motivation to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference(s) must teach or suggest all of the claim limitations. *See MPEP* § 2142. In addition, when applying 35 U.S.C. § 103, four tenets of patent law must be adhered to: (1) the claimed invention must be considered as a whole, (2) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination, (3) the references must be viewed without the benefit of impermissible hindsight vision, and (4) a reasonable expectation of success is the standard with which obviousness is determined. *See MPEP* § 2141, citing *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 (Fed. Cir. 1986). Applicant respectfully reiterates that such a showing has not been made in this case. *See Reply Pages 14-16.*

In response to Applicant's arguments, the Examiner is of the "opinion that, absent a showing to the contrary, it would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to use bis-resorcinyyl triazine of Hüglin et al. for cosmetic sunscreen compositions of either Hansenne or Allard et al. for its art-recognized purpose and with a reasonable expectation of deriving the same cosmetic effect as set forth in the art." *See Official Action, Page 3.* In addition to the arguments against *prima facie* obviousness presented in the Reply, Applicant maintains that one of skill in the art would *not* have had a reasonable expectation of success in arriving at Applicant's invention due to, at least, the vast structural and physical differences among the purportedly interchangeable components.

Hansenne employs at least one silicone benzotriazole derivative (such as MEXORYL XL) and 2-phenylbenzimidazole-5-sulfonic acid (sold as EUSOLEX 232). Allard employs at least one silicone benzotriazole derivative (such as MEXORYL XL) and a 1,3,5-triazine derivative (such as UVINUL T150 or UVASORB HEB). Hüglin employs bis-resorcinyll triazine compounds (such as TINOSORB S).

MEXORYL XL, EUSOLEX 232, UVINUL T150, UVASORB HEB, and TINOSORB S are structurally different and possess different chemical properties. EUSOLEX 232 is a benzimidazole derivative, is water-soluble, and absorbs UV-B wavelengths; UVINUL T150 and UVASORB HEB are 1,3,5-triazine derivatives and similarly only absorb UV-B wavelengths. Contrarily, TINOSORB S is a bis-resorcinyll triazine which is oil-soluble and absorbs both UV-A and UV-B wavelengths. All of these compounds have different UV absorption spectra, as shown in the attached color graph. Accordingly, one of skill in the art could not reasonably predict how, if at all, variations in the combinations employed by Hansenne, Allard, and/or Hüglin would affect the properties of the resulting composition — this is especially true in light of the fact that Hansenne and Allard stress that their particular combinations resulted in synergistic, unexpected efficacy.

Due to these compounds' differing structural and chemical properties, one of skill in the art would not have reasonably expected that the Examiner's proposed substitution would succeed. Accordingly, Applicant maintains that a *prima facie* case of obviousness has not been made out.

2. Even If A *Prima Facie* Case of Obviousness Is Found To Exist,
Applicant's Unexpected Results Rebut Such a Showing

Applicant continues to stress that a *prima facie* case of obviousness has not been made out. However, should it be determined that such a case has been made, Applicant submits that the following showing of unexpected results negates the alleged obviousness. *See M.P.E.P.* § 716.

A. Procedures

Didier Candau, the named inventor, performed tests which compared the *in vitro* water-resistant SPF and UV-A SPF efficacy of compositions according to Hansenne (Composition C) and Allard (Compositions D and E) with compositions according to the invention (Compositions A and B), using the same support as disclosed in Example 2 of the instant application. Components and SPFs are expressed in %s.

UV A Absorption Test

Quartz plates with tape Transpore® were used as the spreading support.

Approximately 30 mg of composition was deposited manually, resulting in an application of 1.4 mg/cm². Using an Optétrics Spectroradiometer SPF -290, monochromatic readings of the protection factors were taken every 5 nm between 290 nm and 400 nm. The spectrum of light source was the Sun of Diffey method. The UV-A Absorption efficacy, or protection index ("PI" in following table), is expressed mathematically by the ratio of the dose of UV-A radiation necessary to reach the pigmentation threshold with the UV screening agent ("MPPD_p") to the dose of UV-A radiation necessary to reach the pigmentation threshold with UV screening agent ("MPPD_{np}"):

$$PI = MPPD_p \div MPPD_{np}$$

SPF Resistance Test

Slide frames with tape Transpore® were used as the spreading support.

Approximately 30 mg of composition was deposited manually, resulting in an application of about .75 mg/cm². The samples were immersed and stirred in a water bath at 30°C for 10 minutes, and then dried by fan. The SPF of the samples was measured before and after immersion using an Optétrics Spectroradiometer SPF -290, monochromatic readings of the protection factors being taken every 5 nm between 290 nm and 400 nm. The spectrum of light source was the Sun of Diffey method. The SPF water resistance was measured according to the following formula:

$$\text{SPF} = ((\text{average SPF after immersion} - 1) \times 100) \div (\text{average SPF before immersion} - 1)$$

B. Results

The following data were obtained:¹

Comp	MEXORYL	TINOSORB S	EUSOLEX 232	UVINUL T150	PI	SPF
A	2	4			6.1 ± 1.1	38
B	2	2			5.1 ± 0.2	38
C	2		4		3.6 ± 0.3	1
D	2			4	2.7 ± 0.2	53
E	2			2	2.7 ± 0.4	58

¹ Should the Examiner prefer the following information in the form of a Declaration by Mr. Candau, such a Declaration will gladly be provided.

From the foregoing, one sees that, unexpectedly, the substitution of EUSOLEX 232 of Hansenne with TINOSORB S results in an effective composition, one having an increase from 3.6 ± 0.3 to 6.1 ± 1.1 in UV A absorbance and an increase from 1 to 38% SPF water resistance. *See Composition C versus Composition A.* Also unexpectedly, the substitution of UVINUL T150 of Allard with TINOSORB S results in an effective composition, one having an increase from 2.7 ± 0.2 to 6.1 ± 1.1 in UV A absorbance; yet a decrease in SPF water resistance from 53% to 38%. *See Composition D versus Composition A.* Similarly unexpectedly is the substitution of UNIVUL T150 of Allard with TINOSORB S resulting in an effective composition, one having an increase from 2.7 ± 0.4 to 5.1 ± 0.2 UV A absorbance and a decrease from 58% to 38% in SPF water resistance. *See Composition E versus Composition B.*


In summary, Applicant's invention exhibits an unexpected and superior combination of UV A absorption and SPF water resistance. Based on the foregoing, Applicant submits that the unexpected and superior results overcome any showing of *prima facie* obviousness that may have been made out.

CONCLUSION

From the foregoing, further and favorable consideration in the form of a Notice of Allowance is respectfully requested and earnestly solicited.

In the event that there are any questions relating to this Request for Reconsideration, or the application in general, it would be greatly appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,
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